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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/671,978 | 09/26/2003 | Yehiel Gotkis | LAM2P438 | 8865 |
| 25920 | 7590 | 10/01/2004 | EXAMINER | |
| MARTINE & PENILLA, LLP 710 LAKEWAY DRIVE SUITE 170 SUNNYVALE, CA 94085 | | | DAVIS, OCTAVIA L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2855 | |

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|---------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/671,978 | GOTKIS ET AL. | |
| | Examiner | Art Unit | |
| | Octavia Davis | 2855 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandhu et al in view of Kistler et al.

Regarding claims 1, 6, 10, 15, 17, 18, 21 and 22, Sandhu et al disclose a method for controlling a CMP process comprising a wafer carrier 20 supporting a wafer 10 during a planarization process (See Col. 5, lines 16 – 55), a computing device (See Col. 6, lines 30 – 38) in communication with a sensor and a stress relief device 26, 28 responsive to a signal received from the computing device, the stress relief device relieving the stress on the wafer (See Col. 5, lines 38 – 40) but does not disclose a sensor configured to detect a signal indicating a stress experienced by the wafer. However, Kistler et al disclose a chemical mechanical planarization process comprising sensors 541 for measuring and monitoring a condition of a wafer 311 (See Col. 11, lines 10 – 13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sandhu et al according to the teachings of Kistler et al for the purpose of, measuring an eddy current on the surface of the wafer (See Kistler et al, Col. 11, lines 16 – 18).

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Regarding claims 2, 3, 16 and 19, in Sandhu et al, a temperature sensor 22 detects a signal indicating a thermal stress (See Col. 5, lines 29 - 33).

Regarding claims 4, 5 and 20, in Sandhu et al, the stress relief device 26 is a platen 16 (See Col. 5, lines 34 – 40).

Regarding claims 7 and 24, in Sandhu et al, the computing device includes a signal compensation module used with circuitry to control the operational parameters of the CMP process (See Col. 6, lines 30 – 38).

Regarding claims 8 and 11, in Sandhu et al, the wafer carrier supports a substrate over a polishing pad, which moves in a linear direction when the wafer rotates (See Col. 5, lines 16 – 23).

Regarding claims 9 and 23, in Sandhu et al, a polishing agent is dispensed through a conduit onto the surface of the pad 18 (See Col. 5, lines 46 – 48).

Regarding claims 12 and 13, in Sandhu et al, the stress relief device 26 includes a drive motor, the motor being capable of reducing one of a rotational speed of the wafer carrier and a linear velocity of the polishing pad (See Col. 5, lines 34 – 40).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Le (6,741,076) discloses an eddy current measuring system for monitoring and controlling a CMP process.

Uzoh et al (5,911,619) teach a method of planarizing a layer of a workpiece.

4. Any inquiry concerning this communication should be directed to examiner Octavia Davis at telephone number 571.272.2176.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Edward Lefkowitz, can be reached on 571.272.2180. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306.

OD

OD/2855

9/26/04


EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800